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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/362,020 | 07/27/1999 | ROBERT J. MEYER | D/96602Q2 | 6310 |

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| 7590 10/08/2003 | EXAMINER |
| JOHN E BECK<br>XEROX CORPORATION<br>XEROX SQUARE 20A<br>ROCHESTER, NY 14644 | LAMB, TWYLER MARIE |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2622 | |

DATE MAILED: 10/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on _17 July 2003_ .

2a)☒ This action is **FINAL**.          2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) _-_ is/are pending in the application.

   4a) Of the above claim(s) _1-20_ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

   If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____ .

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

   a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

| | |
|---|---|
| 1)☐ Notice of References Cited (PTO-892) | 4)☐ Interview Summary (PTO-413) Paper No(s). _____ . |
| 2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5)☐ Notice of Informal Patent Application (PTO-152) |
| 3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6)☐ Other: . |

## DETAILED ACTION

### *Notice to Applicant(s)*

1.      This action is responsive to the following communications: Response filed on

7/12/03.

2.      This application has been reconsidered. Claims 1-20 are pending.

### *Claim Rejections - 35 U.S.C. 103*

3.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
>
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
>
> the prior art are such that the subject matter as a whole would have been obvious at the time the
>
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
>
> Patentability shall not be negatived by the manner in which the invention was made.

4.      Claims 1-4, 8, 9, 13-15 and 19-20are rejected under 35 U.S.C. 103(a) as being

unpatentable over Eki et al. (Eki) (US 5,706,046)in view of Estabrooks et al.

(Estabrooks) (US 6,177,948).

With regard to claim 1, Eki discloses an improved electronically stored font (col 7,

line 56 – col 8, line 3) for use in an electrostatographic machine, comprising: a font

representation (According to page 12, lines 7-13, the font representation is defined as a

collection of capital and lower case letters, numeric and special characters of one

particular type face and style to be utilized in electronic displays and printers, which

reads on image data suitable for use in a digital printer, copier or facsimile which represent text or line art) (col 7, line 56 – col 8, line 3)

Eki differs from claim 1 in that he does not clearly teach a non-printing auxiliary pixel embedded in the font representation to improve the printing of the font.

Estabrook discloses an electrophotographic apparatus and a method that includes a non-printing auxiliary pixel embedded in the font representation to improve the printing of the font (col 7, lines 40).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Eki to include a non-printing auxiliary pixel embedded in the font representation to improve the printing of the font as taught by Eastabrook. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Eki by the teaching of Eastabrook to reduce the toner pile as taught by Eastabrook in the Abstract.

With regard to claim 2, Eki also discloses wherein the auxiliary pixel comprises a □black□ auxiliary pixel (which reads on being able to perform using black-and-white or multi-color printing) (col 7, lines 14-20).

With regard to claim 3, Eki also discloses wherein the auxiliary pixel comprises a □white□ auxiliary pixel (which reads on being able to perform using black-and-white or multi-color printing) (col 7, lines 14-20).

With regard to claim 4, Eki also discloses wherein the font representation is a bit map type (col 7, line 56 – col 8, line 3).

With regard to claim 8, Eki discloses a method for improving a text image (which

reads on removing jaggedness in an outline section of characters, graphics, etc.

(dejagging)) (col 2, lines 29-38; col 7, line 56 – col 8, line 3), comprising receiving

(which reads on print data signal being inputted from the host computer) (col 6, lines 32-

35, col 6, lines 38-39) text data (which reads on characters) (col 2, lines 29-38); and

processing the text data with a font representation (According to page 12, lines 7-13,

the font representation is defined as a collection of capital and lower case letters,

numeric and special characters of one particular type face and style to be utilized in

electronic displays and printers, which reads on image data suitable for use in a digital

printer, copier or facsimile which represent text or line art) (col 7, line 56 – col 8, line 3).

Eki differs from claim 8 in that he does not clearly teach a non-printing auxiliary

pixel embedded in the font representation to improve the printing of the font.

Estabrook discloses an electrophotographic apparatus and a method that

includes a non-printing auxiliary pixel embedded in the font representation to improve

the printing of the font (col 7, lines 40).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to have modified Eki to include a non-printing auxiliary pixel embedded

in the font representation to improve the printing of the font as taught by Eastabrook. It

would have been obvious to one of ordinary skill in the art at the time of the invention to

have modified Eki by the teaching of Eastabrook to reduce the toner pile as taught by

Eastabrook in the Abstract.

With regard to claims 9 and 15, Eki also discloses wherein the step of processing includes using a font representation of a bit map type (col 7, line 56 – col 8, line 3).

With regard to claim 13, Eki discloses in a digital imaging system (Figure 2, color laser beam printer including printer controller 4 coupled to the image processor 5 which is connected to host computer 6), a method for optimizing a rendition of a text image (which reads on removing jaggedness in an outline section of characters, graphics, etc. (dejagging)) (col 2, lines 29-38; col 7, line 56 – col 8, line 3), comprising: receiving text data (which reads on print data signal being inputted from the host computer) (col 6, lines 32-35, col 6, lines 38-39) text data (which reads on characters) (col 2, lines 29-38); and processing the text data with a font representation (According to page 12, lines 7-13, the font representation is defined as a collection of capital and lower case letters, numeric and special characters of one particular type face and style to be utilized in electronic displays and printers, which reads on image data suitable for use in a digital printer, copier or facsimile which represent text or line art) (col 7, line 56 – col 8, line 3).

Eki differs from claim 13 in that he does not clearly teach a non-printing auxiliary pixel embedded in the font representation to improve the printing of the font.

Estabrook discloses an electrophotographic apparatus and a method that includes a non-printing auxiliary pixel embedded in the font representation to improve the printing of the font (col 7, lines 40).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Eki to include a non-printing auxiliary pixel embedded in the font representation to improve the printing of the font as taught by Eastabrook.  It

would have been obvious to one of ordinary skill in the art at the time of the invention to

have modified Eki by the teaching of Eastabrook to reduce the toner pile as taught by

Eastabrook in the Abstract.

With regard to claim 14, Eki also includes wherein the step of processing

comprises generating image text using a processing system including a digital front end

(which reads on host computer outputting print data signal) (Figure 2, color laser beam

printer including printer controller 4 coupled to the image processor 5 which is

connected to host computer 6) (col 6, lines 32-35).

With regard to claim 19, Eki also includes wherein the bit map representation has

auxiliary pixels as previously stored therein (col 6, lines 45-54; col 15, lines 19-26).

With regard to claim 20, Eki also includes wherein the bit map representation has

auxiliary pixels inserted therein by a method comprising: stepping a n x n window

across each pixel location in the bit map (which reads on discriminating with a m-

numbered line in an n-numbered row) (col 8, line 45 – col 10, line 17); counting the

number of □on□ pixels in the window (which reads on showing the dot pattern including

the dots to be printed) (col 9, lines 11-46); and comparing the number against a set

threshold number to determine if the location is in an area of font detail (which reads on

during the discrimination process ensuring the printing dots receive modulation) (col 9,

line 36 –col 10, line 17).

## *Claim Rejections - 35 U.S.C. 103*

5.      The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
>
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
>
> the prior art are such that the subject matter as a whole would have been obvious at the time the
>
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
>
> Patentability shall not be negatived by the manner in which the invention was made.

6.      Claims 5-7, 10-12 and 16-18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Eki et al. (Eki) (US 5,706,046) in view of Estabrooks et al.

(Estabrooks) (US 6,177,948) as applied to claim 1 above and further in view of Zack et

al. (Zack) (US 5,459,828).

With regard to claim 5, Eki differs from claim 5 in that he does not clearly teach

wherein the font representation is a contour type.

Zack discloses a method of producing a raster font that teaches wherein the font

representation is a contour type (Figure 1, contour font 10, col 3, lines 3-7).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to have modified Eki to include wherein the font representation is a

contour type as taught by Zack.  It would have been obvious to one of ordinary skill in

the art at the time of the invention to have modified Eki by the teaching of Zack to

convert contour fonts to bitmap fonts with automatic thickening and thinning to produce

a raster font as taught by Zack in col 2, lines 38-55.

With regard to claim 6, Eki differs from claim 6 in that he does not clearly teach

wherein the font representation is a spline-knot type.

Zack discloses a method of producing a raster font that teaches wherein the font representation is a spline-knot type (According to page 12, lines 19-20, contours may be represented by spline knots and stored on disk to be rasterized later, which reads on a contour font being analyzed and altered to produce a raster font) (Figure 1, contour font 10, col 3, lines 3-7; col 2, lines 38-55).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Eki to include wherein the font representation is a spline-knot type as taught by Zack. It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Eki by the teaching of Zack to convert contour fonts to bitmap fonts with automatic thickening and thinning to produce a raster font as taught by Zack in col 2, lines 38-55.

With regard to claim 7, Eki differs from claim 7 in that he does not clearly teach wherein the font representation is a bit meta type.

Zack discloses a method of producing a raster font that teaches wherein the font representation is a meta type (According to page 12, lines 22-26, meta type font representation contains no art work master to start with and spline functions are used instead to form the median or skeleton of the desired font map, which reads on a hint which defines the parameters defining the font) (Figure 12, hint generation step 20, col 3, lines 6-58).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention was made to have modified Eki to include wherein the font representation is a meta type as taught by Zack. It would have been obvious to one of

ordinary skill in the art at the time the invention was made to have modified Eki by the

teaching of Zack to simplify the type of information necessary to produce a raster font

as taught by Zack in col 3, lines 54-58.

With regard to claims 10 and 16, Eki differs from claims 10 and 16 in that he

does not clearly teach wherein the step of processing includes using a font

representation of a contour type.

Zack discloses a method of producing a raster font that teaches wherein the font

representation is a contour type (Figure 1, contour font 10, col 3, lines 3-7).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to have modified Eki to include wherein the font representation is a

contour type as taught by Zack. It would have been obvious to one of ordinary skill in

the art at the time of the invention to have modified Eki by the teaching of Zack to

convert contour fonts to bitmap fonts with automatic thickening and thinning to produce

a raster font as taught by Zack in col 2, lines 38-55.

With regard to claims 11 and 17, Eki differs from claims 11 and 17 in that he

does not clearly teach wherein the step of processing includes using a font

representation of a spline-knot type.

Zack discloses a method of producing a raster font that teaches wherein the font

representation is a spline-knot type (According to page 12, lines 19-20, contours may be

represented by spline knots and stored on disk to be rasterized later, which reads on a

contour font being analyzed and altered to produce a raster font) (Figure 1, contour font

10, col 3, lines 3-7; col 2, lines 38-55).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to have modified Eki to include wherein the font representation is a

spline-knot type as taught by Zack. It would have been obvious to one of ordinary skill

in the art at the time of the invention to have modified Eki by the teaching of Zack to

convert contour fonts to bitmap fonts with automatic thickening and thinning to produce

a raster font as taught by Zack in col 2, lines 38-55.

With regard to claims 12 and 18, Eki differs from claims 12 and 18 in that he

does not clearly teach wherein the step of processing includes using a font

representation of a bit meta type.

Zack discloses a method of producing a raster font that teaches wherein the font

representation is a meta type (According to page 12, lines 22-26, meta type font

representation contains no art work master to start with and spline functions are used

instead to form the median or skeleton of the desired font map, which reads on a hint

which defines the parameters defining the font) (Figure 12, hint generation step 20, col

3, lines 6-58).

Therefore it would have been obvious to one of ordinary skill in the art at the time

of the invention to have modified Eki to include wherein the font representation is a

meta type as taught by Zack. It would have been obvious to one of ordinary skill in the

art at the time of the invention to have modified Eki by the teaching of Zack to simplify

the type of information necessary to produce a raster font as taught by Zack in col 3,

lines 54-58.

*Response to Arguments*

7.    Applicant's arguments filed 7/17/03 have been fully considered but they are not

persuasive.

Applicant argues that present invent is directed towards development and

addressing the problem of leading edge deletion.

The claims states "an improved electronically stored font (col 7, line 56 – col 8,

line 3) for use in an electrostatographic machine, comprising: a font representation; and

a non-printing auxiliary pixel embedded in the font representation to improve the printing

of the font.

Estabrook discloses an electrophotographic apparatus and a method that

includes a non-printing auxiliary pixel embedded in the font representation to improve

the printing of the font (col 7, lines 40)

There is no disclosure in the claims at to development and addressing the

problem of leading edge deletion.  The applicant appears to address subject matter in

the arguments that is not addressed in the claims.

## *Conclusion*

8.    **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action.  In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

9.      Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Twyler Lamb whose telephone number is 703 - 308-

8823. The examiner can normally be reached on M-TH (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward L Coles can be reached on 703-308-4712. The fax phone numbers

for the organization where this application or proceeding is assigned are 703-872-9306

for regular communications and 703-872-9314 for After Final communications.

Any response to this action should be mailed to:

> Commissioner of Patents and Trademarks
> Washington, DC  20231

or faxed to:

> (703) 872-9314
>
> (for informal or draft communications, such as proposed amendments to be
> discussed at an interview; please label such communications "PROPOSED" or
> "DRAFT")

or hand-carried to:

> Crystal Park Two
> 2121 Crystal Drive
> Arlington. VA.
> Sixth Floor (Receptionist)

Twyler Lamb

October 6, 2003

EDWARD COLES
SUPERVISORY PATENT EXAMINER
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